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ABSTRACT

These findings suggest that the relative effect of the main therapeutic procedure and expectancy (defined by the presence or absence of a therapeutic rationale and instructions suggesting a positive outcome from treatment) varies with different behavioral therapies. With reinforced practice and covert sensitization the main therapeutic procedure had far more effect thar. therapeutic instructions. For desensitization, it is concluded that the critical procedure only facilitates imaginal approach to feared or phobic situations. Most of the therapeutic effect is due to expectancy. The degree of the effect of expectancy varies with different experiments, and it is suggested that the more disabling the disorder the less the effect of therapeutic instructions. It is further questioned how the giving of therapeutic instructions and a believable rationale, influences behavior change in neurotic conditions. With phobia it appears that desensitization facilitates imaginal approach to the feared situation. This may lead the patient to try to approach the situation in reality, which in turn may be responsible for the demonstrated superiority of desensitization to other forms of the therapy. However, including exposure to the feared situation greatly adds to the efficacy of desensitization, and is beneficial in its own right. (MA)

THE ROLE OF THERAPEUTIC INSTRUCTION IN THE MODIFICATION OF NEUROTIC DISORDERS

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All psychotherapies consist of a main therapeutic procedure which supposedly accounts for most of the therapeutic effect, and less specific factors such as therapeutic instructions and explanations of the rationale of therapy. What, however, is the relative contribution of therapeutic instructions and the main therapeutic procedure to the behavior therapies? I will briefly present some data which sheds light on this question for systematic desensitization, reinforced practice, and covert sensitization in the treatment of neurotic conditions.

The main therapeutic procedure in systematic desensitization is the pairing of graded imaginal approach to the feared object or situation with deep muscular relaxation, hypothesized to be an example of reciprocal inhibition (8). Fig. 1 displays the results of two experiments in which the contribution of therapeutic instructions and therapist attention to improvement to the desensitization of snake fears was examined (5,7). In both studies the main measure of outcome was a behavioral approach test score, conducted by experimenters not aware of which experimental group the subject belonged to. In the first study, one group was given therapeutic instructions and praised for progress (I+R+); another was led to believe that they were taking part in a (non-therapeutic) experiment (I-R-) and were not told that desensitization was a therapy; while the last was an untreated control group. Only the group given therapeutic instructions differed significantly from the untreated control group, although the second group (I-R-) showed a significant change from beginning to end of the experiment. In the second experiment designed to test the relative contributions of therapeutic instructions and therapist attention to progress (7),

only instructions were found to have a significant effect. Again, however, the group not receiving therapeutic instructions showed some benefit from the procedure, suggesting that the removal of therapeutic instructions very much reduces but does not entirely eliminate the effect of desensitization.

The next question asked, was what would happen if the critical therapeutic procedure, namely pairing relaxation with the visualization of feared scenes, was dropped out, while continuing therapeutic instructions to induce a positive expectancy. This was done in a single case design with four phobic patients, in which relaxation was dropped out of the procedure during one phase of treatment, although the patient was told that this was beneficial since "one cannot always relax in real life" (3). In each patient then, three phases of equal length consisting of desensitization with relaxation, without relaxation, and with relaxation once more were held, while measuring (a) behavior in the phobic situation, (b) a self rating of progress, and (c) progress through the hierarchy. If pairing relaxation with visualization of feared scenes is critical then progress in each of these measures should stop or reverse during the critical middle phase. Table 1 summarizes the results. Removing the critical therapeutic procedure only affected ability to visualize approaching the feared situation (progress through the hierarchy). Thus, for desensitization we must conclude that therapeutic instructions contribute more than the hypothesized critical therapeutic procedure. The most seriously disabled patient, an agoraphobe, showed little progress, suggesting little or no effect from instructions in her case.

The second therapy to be examined was reinforced practice, based on the application of selective positive reinforcement, in which the opportunity to perform the desired behavior is afforded, and performance is

reinforced. I will briefly present two examples, using a single case design, with a first phase characterized by the use of therapeutic instructions alone; the second by addition of the critical reinforcement procedure; the third by a return to instructions alone; and the fourth by adding reinforcement again. The first case (1), is that of a severe agoraphobic patient, in which as Fig. 2 demonstrates, distance walked along over a standard course was measured for each condition. No effect was seen from therapeutic instructions in the first phase. The addition of praise contingent upon walking further alone, led to a steady increase in distance walked; return to therapeutic instructions alone reversed this trend, while reinstatement of reinforcement led to continued progress.

Similar findings were made in a young man diagnosed as having an obsessive compulsive neurosis manifested by almost total avoidance of social or potentially injurious situations (2). The behavior worked with in this experiment was conversational ability, defined as time spent in self initiated talking to nursing staff during three 90-minute sessions each day, aimed at eliminating his severe social withdrawal. During the first phase (see Fig. 3) instructions of varying intensity were given at the beginning of each session. As can be seen this had little effect. In the next phase tokens exchangable for pleasurable activities were made contingent upon talking; as can be seen an increase in conversational ability occured. In the next phase tokens were given non-contingently, instructions of course continuing, and a steady decline in behavior was found. Return to reinforcement in the final phase resulted in steady improvement.

Further experiments with severe neurotic behavior (1,2,6) confirmed these findings. Therapeutic instructions led at most to a transient improvement, of relatively minor magnitude compared to the effect of

reinforced practice.

In the final experiment the relative effect of therapeutic instructions and the assumed critical therapeutic procedure was looked at in covert sensitization. In this therapy the critical procedure is the pairing of descriptions of noxious scenes with descriptions of the deviant behavior. The subjects were four male homosexuals who were each treated in sequential phases with (1) therapeutic instructions and a placebo procedure which omitted presentation of the noxious scenes, but which preserved a therapeutic rationale; (2) covert sensitization with instructions suggesting a "paradoxical" effect of worsening; (3) a return to the conditions of Phase 1; and (4) covert sensitization with positive expectancy. The critical measure used was penile response, measured by a transducer, to slides of sexually arousing males. Fig. 4 shows the group results. Fairly stable responses were found during a no treatment baseline. Therapeutic instructions together with the placebo conditions, suggesting to the patient that relaxation would inhibit homosexual arousal and lead to improvement, led to no improvement. However, when the results are looked at individually, two of the patients showed improvement and two worsening, the positive and negative effects cancelling out in the group data. When covert sensitization was introduced with suggestions indicating that the patient would worsen there was clear improvement. Return to placebo conditions led to worsening, although one patient showed continued improvement, while finally covert sensitization with positive instructions led to continued improvement. Intriguingly, not only did the patients appear to believe (from their verbal statements) that the placebo treatment was the therapy until the final phase, but they ignored their decreasing responses to homosexual stimuli in the second phase of the experiment reporting more or the same amount of homosexual arousal as in the previous phase. Overall then, we

must conclude that the critical therapeutic procedure contributes more to the treatment of homosexuality than a placebo treatment, and even outweighs negatively oriented instructions.

Conclusions

These findings suggest that the relative effect of the main therapeutic procedure and expectancy (defined by the presence or absence of a therapeutic rationale and instructions suggesting a positive outcome from treatment) varies with different behavioral therapies. With reinforced practice and covert sensitization the main therapeutic procedure had far more effect than therapeutic instructions. For desensitization we must conclude that the critical procedure only facilitates imaginal approach to feared or phobic situations. Most of the therapeutic effect is due to expectancy.

How large is the effect of expectancy? In the experiments with snake fears quite considerable improvement was attributed to the expectancy effect. Later studies (4) suggested that exposure to the actual feared situation, while relaxed, in a shaping procedure, or by using modeling, enhances the effectiveness of desensitization. In the clinical study of desensitization the expectancy effect, seen most clearly during the middle phase when relaxation was removed, was again quite considerable. It is of interest however that the one severe phobic included in this study showed little change. This fits well with the findings of the single case studies of severe phobics where again little effect could be attributed to expectancy alone. It may be that the more disabling the disorder the less the effect of therapeutic instructions.

Finally, we must wonder how the giving of therapeutic instructions and a believable rationale, influences behavior change in neurotic

conditions. In the case of phobia, it appears that desensitization facilitates imaginal approach to the feared situation; this may lead the patient to try to approach the situation in reality, which in turn may be responsible for the demonstrated superiority of desensitization to other forms of therapy. However including exposure to the feared situation greatly adds to the efficacy of desensitization, and is beneficial in its own right (6). Thus, expectancy may work at least in the phobic neuroses, by increasing the probability that the patient will approach the feared situation in reality. Social reinforcement from the therapist would then continue to shape such approach behavior.

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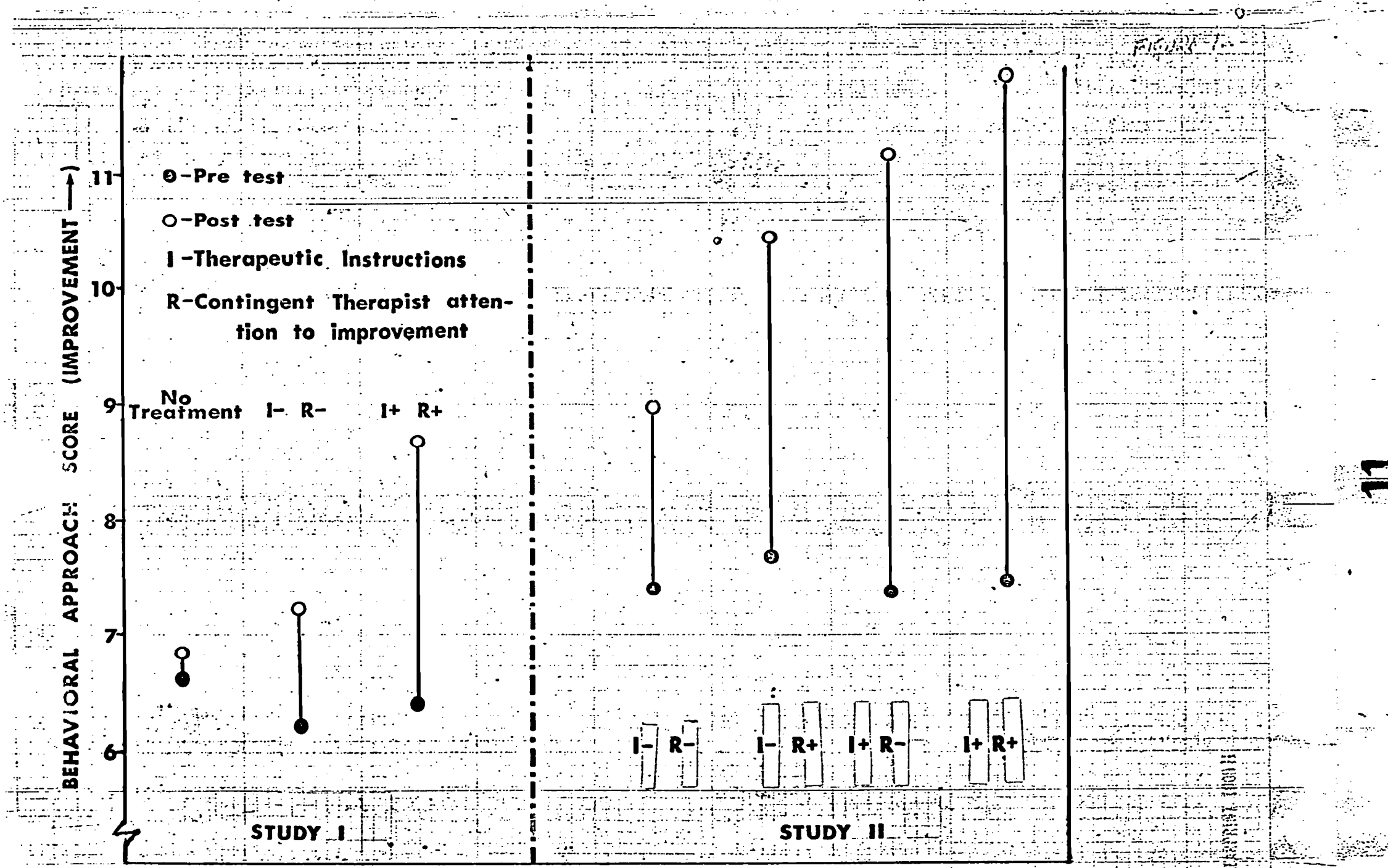
TABLE 1

Median percentage change scores for four phobic patients during desensitization in which relaxation was removed during the middle phase.

	Relaxation	No Relaxation	Relaxation
Behavior in Phobic Situation	23.5	19.0	17.5
Self rating of Progress	11.5	8.0	9.5
Progress through Hierarchy	12.0	0	25.0

FIGURE 1


BEHAVIORAL APPROACH SCORE (IMPROVEMENT ⟶)
11
10
9
8
7
6
⊖-Pre test
○-Post test
I -Therapeutic Instructions
R-Contingent Therapist attention to improvement
No Treatment
I- R-
I+ R+
I- R-
I- R+
I+ R-
I+ R+
STUDY I
STUDY II

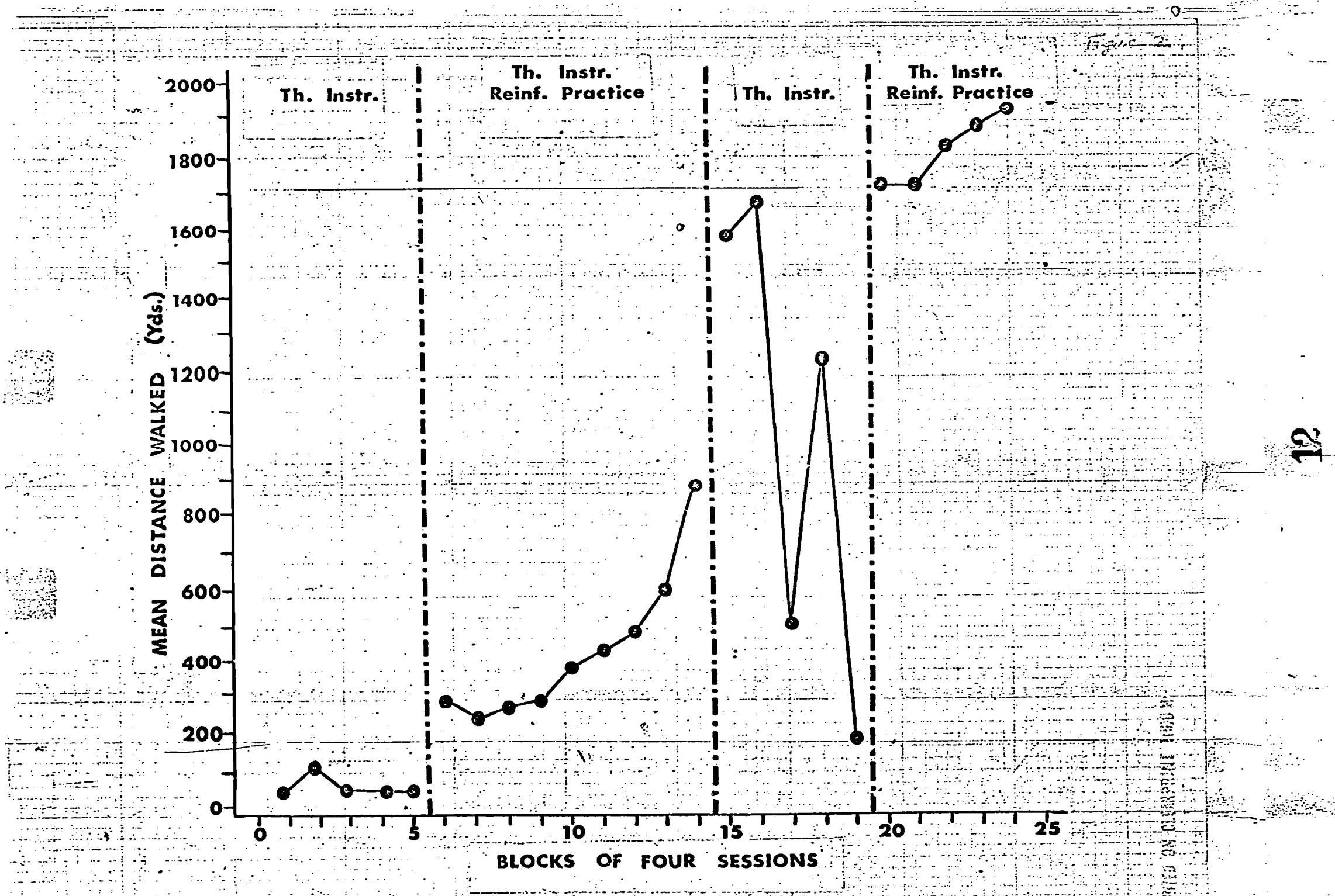

Th. Instr.
Th. Instr.
Reinf. Practice
Th. Instr.
Th. Instr.
Reinf. Practice
MEAN DISTANCE WALKED (Yds.)
2000
1800
1600
1400
1200
1000
800
600
400
200
0
0
5
10
15
20
25
BLOCKS OF FOUR SESSIONS

Figure 2

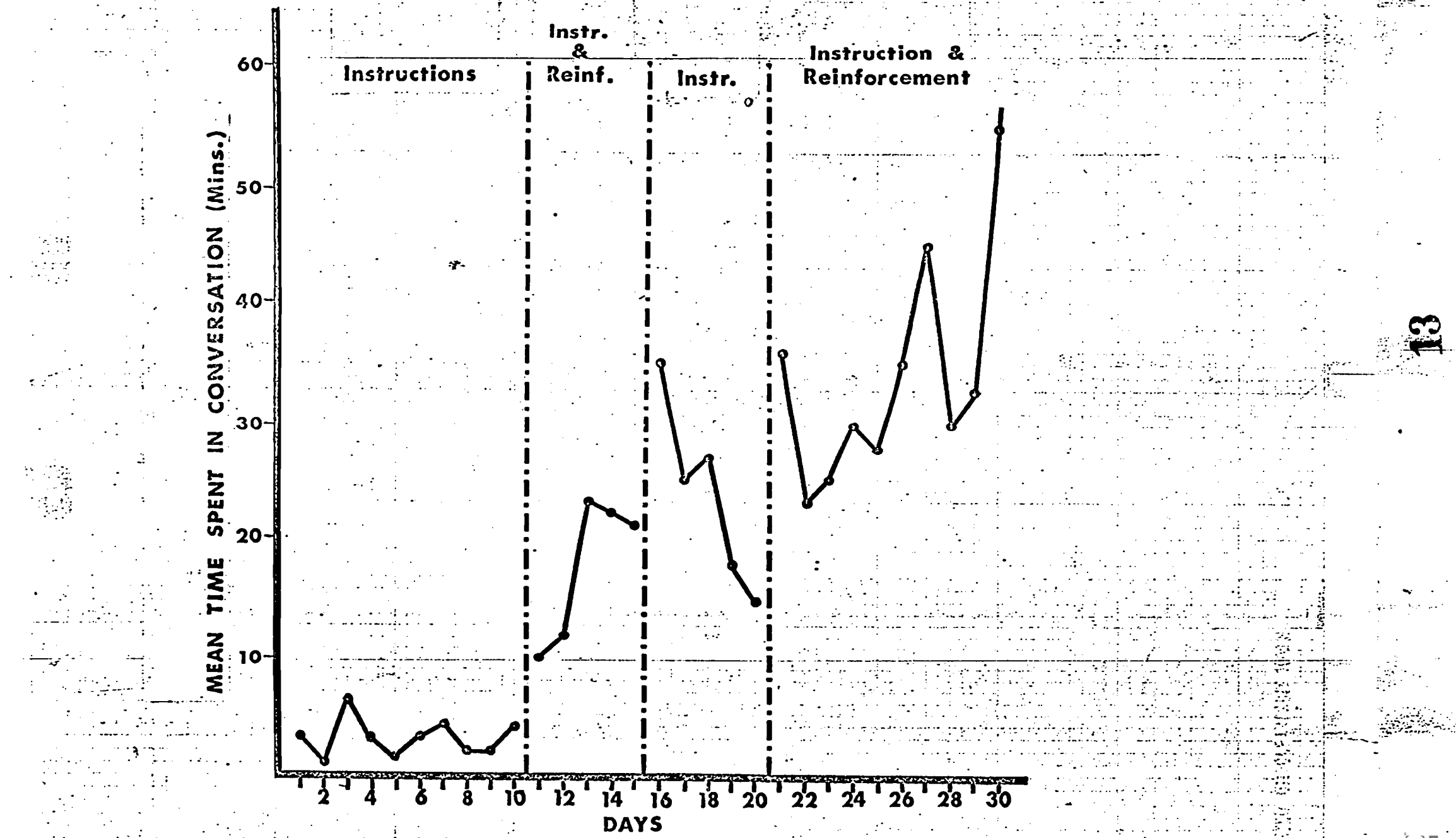
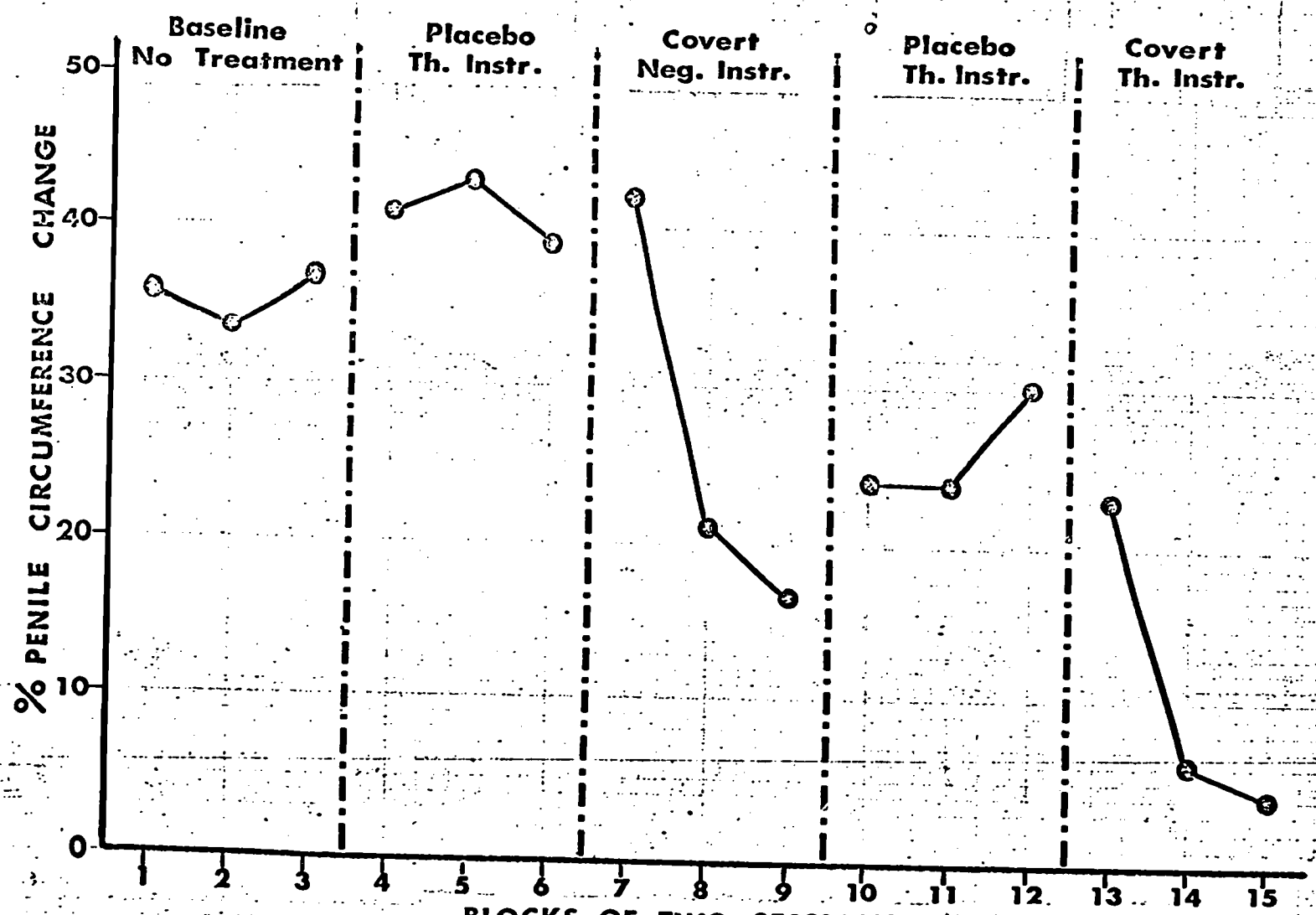

Instructions
Instr. & Reinf.
Instr.
Instruction & Reinforcement
MEAN TIME SPENT IN CONVERSATION (Mins.)
60
50
40
30
20
10
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30
DAYS

FIGURE 4



In each phase, data for the first, middle, and last pairs of sessions are shown.